

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382
Reviewer: Todd/HDJ

This updated assessment is based on the Post-Focus Draft Revision 1 dated 2/26/2018

Results Table: Dose, Concentration, and Days Exceeded Results Summary

Exposure Scenario ¹	Water						Landfill	Stack Air		Fugitive Air	
Release activity(ies) ² ; exposure calculation(s) ³	Drinking Water		Fish Ingestion		7Q10 ⁴ CC = 1	PDM Days Exceeded	LADD	ADR (24-hr conc.)	LADD (Annual conc.)	ADR (24-hr conc.)	LADD (Annual conc.)
	ADR	LADD	ADR	LADD							
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day	µg/l	# Days	mg/kg/day	mg/kg/day (µg/m ³)	mg/kg/day (µg/m ³)	mg/kg/day (µg/m ³)	mg/kg/day (µg/m ³)
PROC: Max LADD	---	---	---	---	---	---	7.40E-04	---	---	---	---
USE: Max ADR: max acute eco	4.27E-06	---	1.72E-05	---	1.90E-01	---	---	---	---	---	---
USE: PDM1	---	---	---	---	1.90E-01	█	---	---	---	---	---
USE: Max LADD	---	1.10E-07	---	1.03E-07	---	---	4.79E-06	---	---	---	---

¹ Exposure scenario titles consist of release activity followed by exposure calculation abbreviation.

² Release activities are from engineering report's Manufacturing (Mfg), Processing (Proc) and Use release activity labels. Multiple release activities are combined in one exposure scenario if their releases occur at same location.

³ Exposure calculations are Acute Dose Rate (ADR), Lifetime Average Daily Dose (LADD), and Probabilistic Dilution Model (PDM). There may be one, two, or all three exposure calculations per exposure scenario. CC is the aquatic concentration of concern.

⁴ This column displays concentration values for the 7Q10 streamflow, which is defined as the average daily streamflow of the seven consecutive days of lowest flow within a ten year period.

Remarks: [REDACTED] The consumer use exposure in the previous assessment was removed in this updated assessment due to a statement in the Engineering Report noting that public exposure to the PMN is expected to be negligible.

USE – POTW Industrialized

Results Table: Exposure Based (XB)/Persistent (P2B2) Criteria

Parameter	Exp Based	Persistent	Exceedance Value
Drinking (Surface) Water Dose (mg/kg/day)	No	NA	
Fish Ingestion Dose (mg/kg/day)	No	NA	
Inhalation Dose (mg/kg/day)	No	NA	
Groundwater Dose (mg/kg/day)	No	NA	
Surface Water Release After Treatment (kg/yr)	No	NA	
Total Release After Treatment (kg/yr)	■	■	■
Consumer Use?	No		

Fate test recommendations?: (default is NA)

SCALING FACTORS FOR DRINKING WATER DOSE

Age Group	Scaling Factor for ADR	Scaling Factor for ADD
Adults	1.0	1.0
Birth to 1	4.17	11.49
1-2	1.63	3.91
3-5	1.24	3.10
6-10	1.12	2.51
11-15	0.83	1.77
16-21	0.79	1.55
Pregnant	1.02	2.07
Lactating	1.31	3.84

Scaling factors for ADR are based on the ratio of 95th percentile drinking water intake/body weight for each age group compared to the 95th percentile drinking water intake/body weight ratio for adults from Table 3-1 of the 2011 edition of the Exposure Factors Handbook.

Scaling factors for age specific ADD are based on the ratio of the mean drinking water intake/body weight for each age group compared to the mean drinking water intake/body weight ratio for adults from Table 3-1 of the 2011 edition of the Exposure Factors Handbook.

Note, default LADD values are based on assumption that 33 years of lifetime exposure occurs in adulthood. If that exposure starts at birth, the LADD increases by 10% (1.1). However, central tendency duration (13 years) and consideration of age specific adjustment factors (ADAF) can be considered on an as needed basis (LADD Scaling factors range from 0.6 to 4.1).

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

Assessor: Todd/HDJ

ENVIRONMENTAL RELEASES

Scenario#:1

Number of Release Sites: 2.

Release Activity: PROC: Max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
----------------------	-------	-------------------------------	-------	----------

Total Releases:

	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:

--	--	--	--	--

Per Site Release:

	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

Assessor: Todd/HDJ

ENVIRONMENTAL RELEASES

Scenario#:2

Number of Release Sites:

Release Activity: USE: Max ADR

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
----------------------	-------	-------------------------------	-------	----------

Total Releases:				
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:				
Per Site Release:				
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 2

Number of Sites: ■■■

RELEASE ACTIVITY: USE: Max
ADR

SIC-CODE DESCRIPTION: POTW (Indust., includes POTWs which receive ind. disch.)

SIC-CODE (S): Subset of 4952

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
■■■	■■■	■■■	■■■■■	0.00	130.00

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER									
PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05	5.21E-03	1.21E-02	1.92E-02	2.27E-02
ALL	10	39.60	13.29	7.76	7.57	3.79E-02	0.11	0.19	0.20

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	1.51E-08	1.10E-07	mg/kg/day	1.41E-08	1.03E-07	mg/kg/day
LADC _{pot}	1.16E-06	8.43E-06	mg/L	1.51E-04	1.10E-03	mg/kg
Acute						
ADR _{pot}	4.59E-07	4.27E-06	mg/kg/day	2.36E-06	1.72E-05	mg/kg/day

SIC Code Comments:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

Assessor: Todd/HDJ

ENVIRONMENTAL RELEASES

Scenario#:3

Number of Release Sites:

Release Activity: USE: PDM1

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
----------------------	-------	-------------------------------	-------	----------

Total Releases:				
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:				
Per Site Release:				
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 3

Number of Sites: ■■■

RELEASE ACTIVITY:USE:
PDM1

SIC-CODE DESCRIPTION: POTW (Indust., includes POTWs which receive ind. disch.)

SIC-CODE (S): Subset of 4952

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
■■■	■■■	■■■	■■■■■	0.00	130.00

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER									
PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05	5.21E-03	1.21E-02	1.92E-02	2.27E-02
ALL	10	39.60	13.29	7.76	7.57	3.79E-02	0.11	0.19	0.20

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	1.51E-08	1.10E-07	mg/kg/day	1.41E-08	1.03E-07	mg/kg/day
LADC _{pot}	1.16E-06	8.43E-06	mg/L	1.51E-04	1.10E-03	mg/kg
Acute						
ADR _{pot}	4.59E-07	4.27E-06	mg/kg/day	2.36E-06	1.72E-05	mg/kg/day

SIC Code Comments:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 3

RELEASE ACTIVITY: USE: PDM1

SIC CODE DESCRIPTION: POTW (Indust., includes POTWs which receive ind. disch.)

ASSOCIATED SIC CODES: Subset of 4952

SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
■	■	■	■	■	■	High

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

Assessor: Todd/HDJ

ENVIRONMENTAL RELEASES

Scenario#:4

Number of Release Sites:

Release Activity: USE: Max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
----------------------	-------	-------------------------------	-------	----------

Total Releases:

	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:

--	--	--	--	--

Per Site Release:

	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 4

Number of Sites: ■

RELEASE ACTIVITY:USE: Max
LADD

SIC-CODE DESCRIPTION: POTW (Indust., includes POTWs which receive ind. disch.)

SIC-CODE (S): Subset of 4952

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
■	■	■	■	■	130.00

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER									
PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05	N/A	N/A	N/A	N/A
ALL	10	39.60	13.29	7.76	7.57	N/A	N/A	N/A	N/A

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	1.51E-08	1.10E-07	mg/kg/day	1.41E-08	1.03E-07	mg/kg/day
LADC _{pot}	1.16E-06	8.43E-06	mg/L	1.51E-04	1.10E-03	mg/kg
Acute						
ADR _{pot}	N/A	N/A	mg/kg/day	N/A	N/A	mg/kg/day

SIC Code Comments:

POST FOCUS EXPOSURE REPORT

Chemical ID: P-17-0382

DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 4

ACTIVITY: USE: Max LADD

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE ¹ AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR ²	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)
833.	██████	██████	████	████	████

¹ Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

Migration Descriptor	Log Koc	Groundwater Concentration (GWC) (mg/L per kg release)
Negligible	no migration	None
Negligible to slow	> 4.5	3.21E-6
Slow	<4.5 to 3.5	2.67E-5
Moderate	<3.5 to 2.5	5.95E-5
Rapid	<2.5	7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (L/day)
Cancer					
LADD _{pot} (mg/kg/day)	4.79E-06	33.00	78.00	80.00	1.04
LADC _{pot} (mg/L)	3.69E-04	33.00	78.00	NA	NA

REMARKS: